

linRegSprech1234SDSAgainstSozDem.R

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```
## delete all data
#rm( list = ls( ) )
warning = F

library( directlabels )
library( dplyr )

##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##   filter, lag

## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union

library( gamlss )

## Loading required package: splines
## Loading required package: gamlss.data
## Loading required package: gamlss.dist
## Loading required package: MASS

##
## Attaching package: 'MASS'

## The following object is masked from 'package:dplyr':
##
##   select

## Loading required package: nlme

##
## Attaching package: 'nlme'

## The following object is masked from 'package:dplyr':
##
##   collapse

## The following object is masked from 'package:directlabels':
##
##   gapply

## Loading required package: parallel

## ***** GAMLSS Version 5.0-1 *****

## For more on GAMLSS look at http://www.gamlss.org/

## Type gamlssNews() to see new features/changes/bug fixes.
```

```

library( ggplot2 )
library( lifecuration )

## Loading required package: lubridate
##
## Attaching package: 'lubridate'
## The following object is masked from 'package:base':
##
##      date
library( lubridate )
library( readxl )
library( reshape2 )
library( svglite )

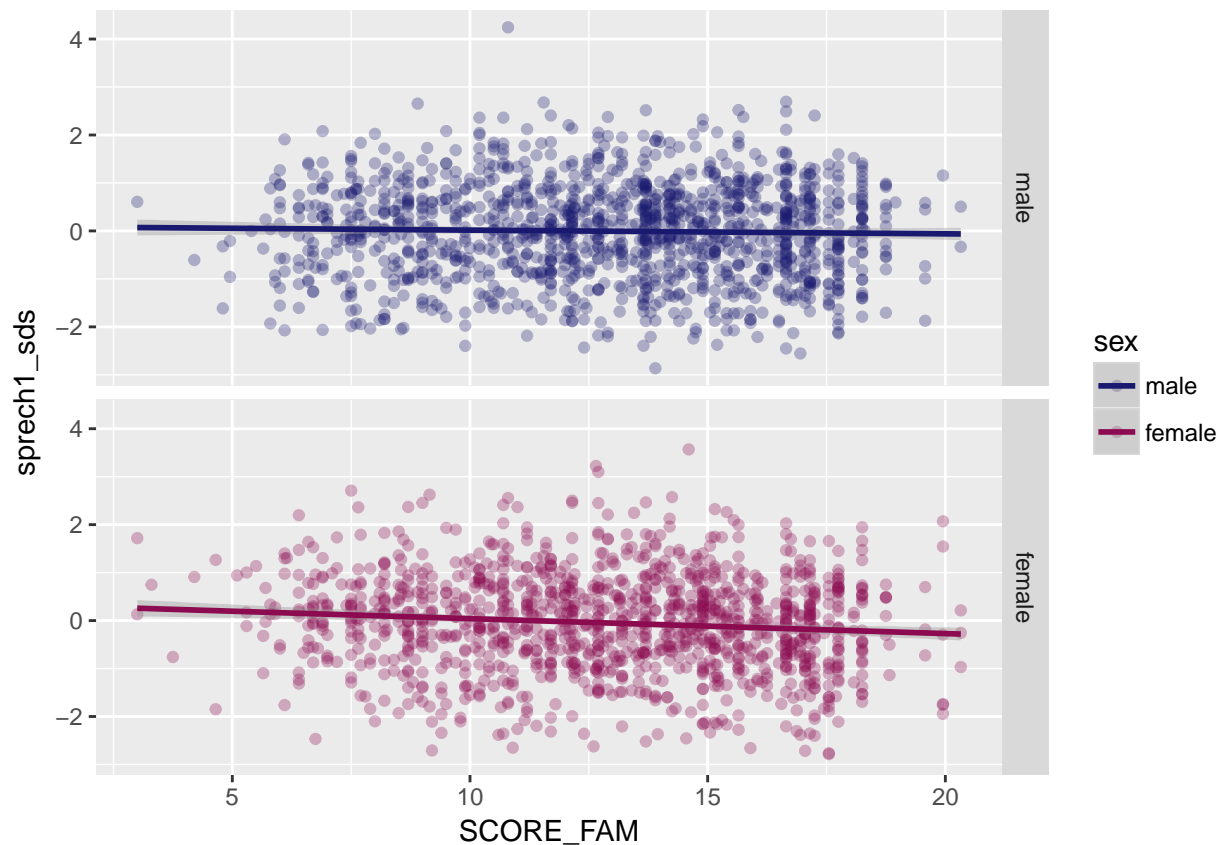
load( file = "~/LIFE/github-tpeschel/R/ThomasBerger/results/refs.Rda" )
load( file = "~/LIFE/github-tpeschel/R/ThomasBerger/results/data.sprech.Rda" )

summary( mm1 <- lm( sprech1_sds ~ sex/SCORE_FAM, data = data.sprech ) )

##
## Call:
## lm(formula = sprech1_sds ~ sex/SCORE_FAM, data = data.sprech)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -2.8499 -0.6781  0.0222  0.6895  4.2342
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.093971   0.107153   0.877  0.38058
## sexfemale      0.256999   0.153279   1.677  0.09373 .
## sexmale:SCORE_FAM -0.007748  0.008028  -0.965  0.33462
## sexfemale:SCORE_FAM -0.031089  0.008222  -3.781  0.00016 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.9993 on 2570 degrees of freedom
## (229 observations deleted due to missingness)
## Multiple R-squared:  0.006357, Adjusted R-squared:  0.005197
## F-statistic:  5.48 on 3 and 2570 DF, p-value: 0.0009422

ggplot( data.sprech, aes( SCORE_FAM, sprech1_sds, col = sex ) ) +
  geom_point( alpha = .3, na.rm = T ) +
  geom_smooth( method = "gam", na.rm = T ) +
  facet_grid( sex ~ . ) +
  scale_color_manual( values = c( "male" = "midnightblue", "female" = "deeppink4" ) )

```



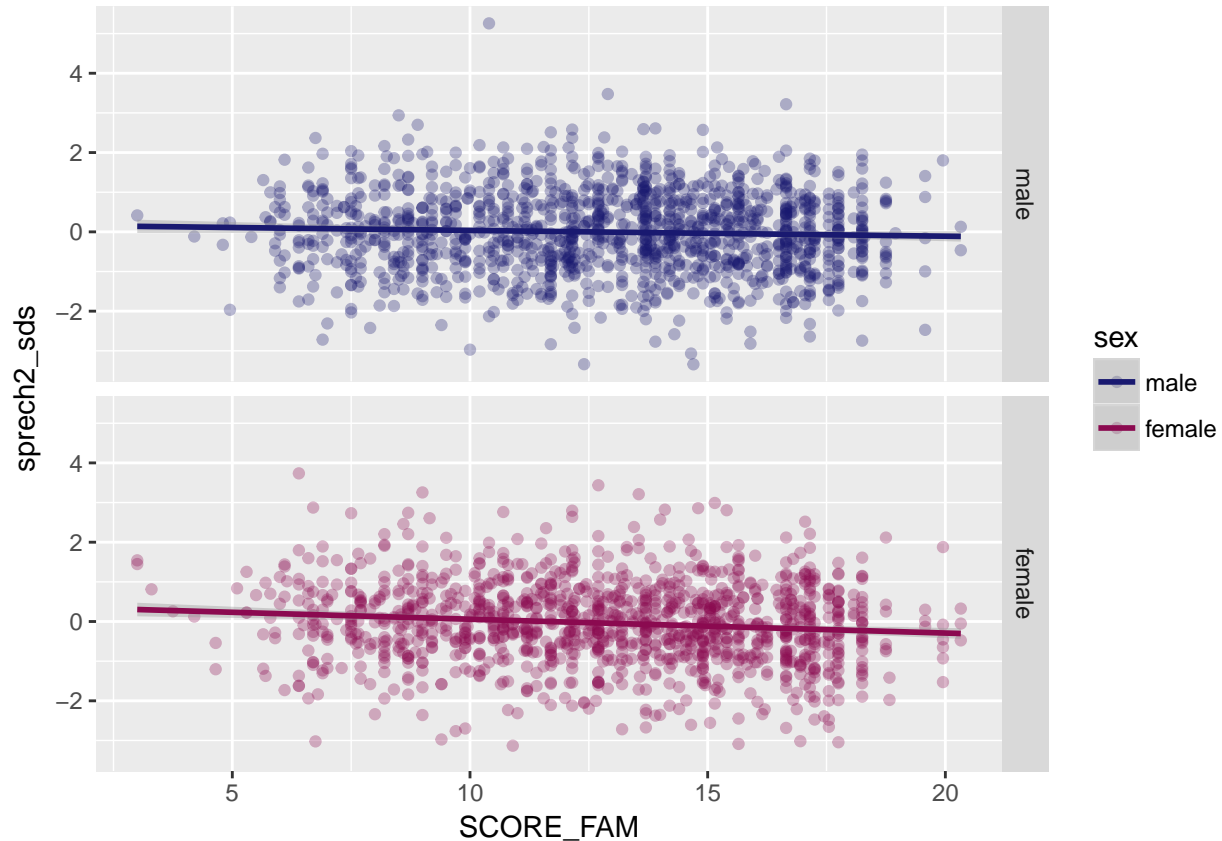
```
ggsave( "linreg.f0.sprech1.sds.against.famscore.png" )
```

```
## Saving 6.5 x 4.5 in image
```

```
summary( mm2 <- lm( sprech2_sds ~ sex/SCORE_FAM, data = data.sprech ) )
```

```
##
## Call:
## lm(formula = sprech2_sds ~ sex/SCORE_FAM, data = data.sprech)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -3.3390 -0.6597 -0.0230  0.6634  5.2270
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.182902   0.109059   1.677   0.0936 .
## sexfemale      0.224375   0.156005   1.438   0.1505
## sexmale:SCORE_FAM -0.014627  0.008171  -1.790   0.0736 .
## sexfemale:SCORE_FAM -0.034899  0.008369  -4.170 3.14e-05 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.017 on 2570 degrees of freedom
## (229 observations deleted due to missingness)
## Multiple R-squared:  0.008264, Adjusted R-squared:  0.007107
## F-statistic: 7.139 on 3 and 2570 DF, p-value: 8.982e-05
```

```
ggplot( data.sprech, aes( SCORE_FAM, sprech2_sds, col = sex ) ) +
  geom_point( alpha = .3, na.rm = T ) +
  geom_smooth( method = "gam", na.rm = T ) +
  facet_grid( sex ~ . ) +
  scale_color_manual( values = c( "male" = "midnightblue", "female" = "deeppink4" ) )
```



```
ggsave( "linreg.sprech2.sds.against.famscore.png" )
```

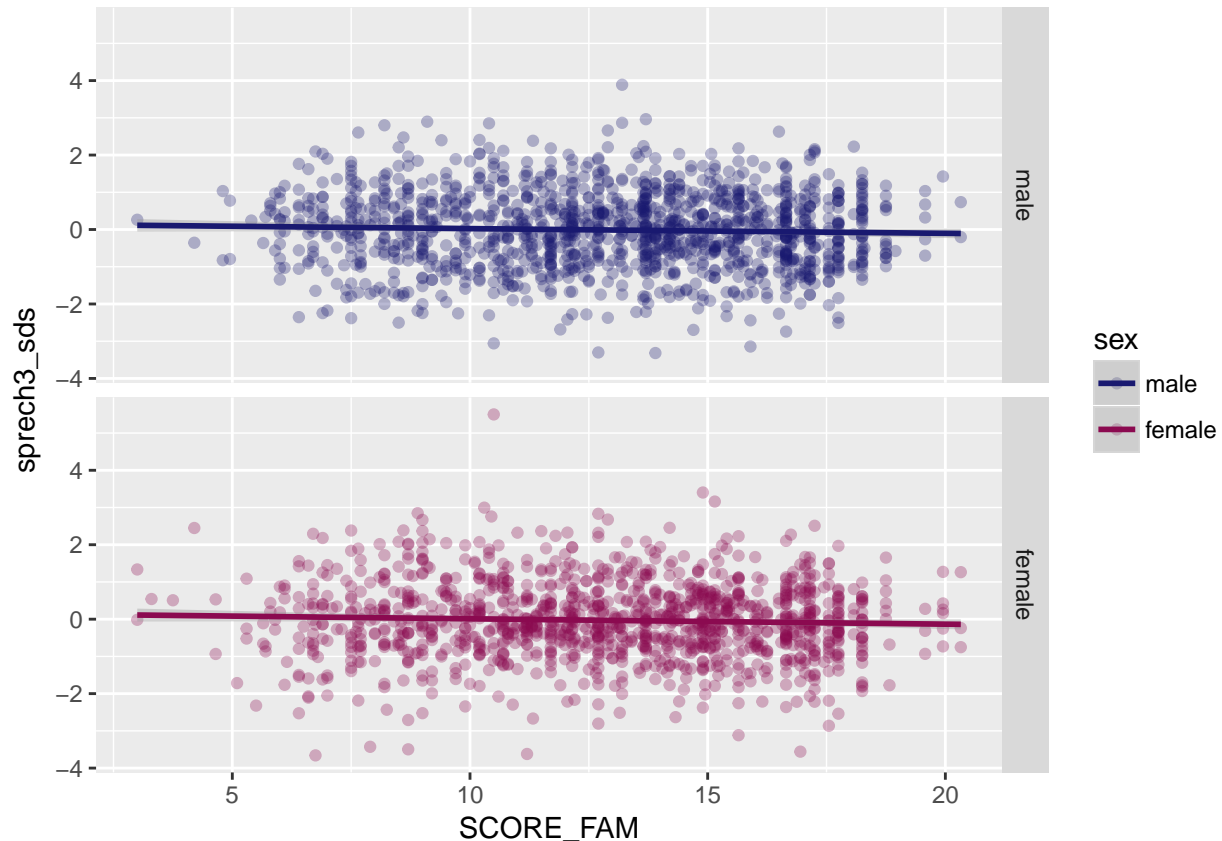
```
## Saving 6.5 x 4.5 in image
```

```
summary( mm3 <- lm( sprech3_sds ~ sex/SCORE_FAM, data = data.sprech ) )
```

```
##
## Call:
## lm(formula = sprech3_sds ~ sex/SCORE_FAM, data = data.sprech)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -3.7163 -0.6589 -0.0145  0.6545  5.4966
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.151205   0.109127   1.386   0.1660
## sexfemale      0.003863   0.156312   0.025   0.9803
## sexmale:SCORE_FAM -0.012687  0.008176  -1.552   0.1208
## sexfemale:SCORE_FAM -0.014448  0.008391  -1.722   0.0852 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
##
## Residual standard error: 1.018 on 2568 degrees of freedom
## (231 observations deleted due to missingness)
## Multiple R-squared: 0.002171, Adjusted R-squared: 0.001006
## F-statistic: 1.863 on 3 and 2568 DF, p-value: 0.1337
```

```
ggplot( data.sprech, aes( SCORE_FAM, sprech3_sds, col = sex ) ) +
  geom_point( alpha = .3, na.rm = T ) +
  geom_smooth( method = "gam", na.rm = T ) +
  facet_grid( sex ~ . ) +
  scale_color_manual( values = c( "male" = "midnightblue", "female" = "deeppink4" ) )
```



```
ggsave( "linreg.sprech3.sds.against.famscore.png" )
```

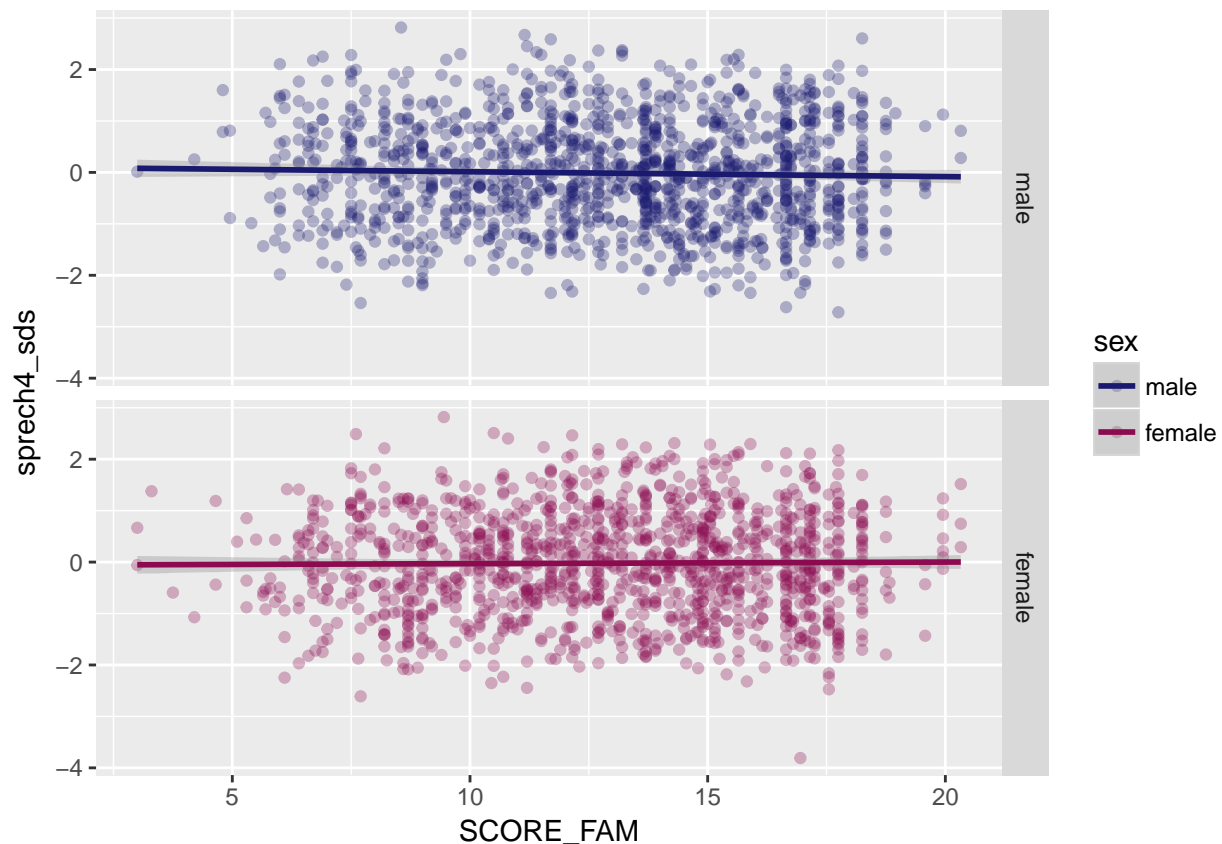
```
## Saving 6.5 x 4.5 in image
```

```
summary( mm4 <- lm( sprech4_sds ~ sex/SCORE_FAM, data = data.sprech ) )
```

```
##
## Call:
## lm(formula = sprech4_sds ~ sex/SCORE_FAM, data = data.sprech)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -3.7999 -0.7335 -0.0255  0.7413  2.8512
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.108856   0.109085   0.998   0.318
```

```
## sexfemale      -0.170237    0.156189   -1.090    0.276
## sexmale:SCORE_FAM -0.009533    0.008169   -1.167    0.243
## sexfemale:SCORE_FAM 0.003088    0.008379    0.369    0.713
##
## Residual standard error: 1.014 on 2558 degrees of freedom
## (241 observations deleted due to missingness)
## Multiple R-squared:  0.0005983, Adjusted R-squared:  -0.0005738
## F-statistic: 0.5105 on 3 and 2558 DF, p-value: 0.6751
```

```
ggplot( data.sprech, aes( SCORE_FAM, sprech4_sds, col = sex ) ) +
  geom_point( alpha = .3, na.rm = T ) +
  geom_smooth( method = "gam", na.rm = T ) +
  facet_grid( sex ~ . ) +
  scale_color_manual( values = c( "male" = "midnightblue", "female" = "deeppink4" ) )
```



```
ggsave( "linreg.sprech4.sds.against.famscore.png" )
```

```
## Saving 6.5 x 4.5 in image
```